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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/830,647A

DATE: 08/09/2002 TIME: 13:54:21

Input Set : A:\ARAI SEQUENCE LISTING.txt

Output Set: N:\CRF4\08092002\I830647A.raw

3 <110> APPLICANT: ARAI, Kenichi MASAI, Hisao 6 <120> TITLE OF INVENTION: Human H37 Protein and cDNA Encoding The Protein 8 <130> FILE REFERENCE: 2001-0531A/LC/00653 10 <140> CURRENT APPLICATION NUMBER: 09/830,647A 11 <141> CURRENT FILING DATE: 2001-07-30 13 <150> PRIOR APPLICATION NUMBER: JP No. 10-311408 14 <151> PRIOR FILING DATE: 1998-10-30 16 <160> NUMBER OF SEQ ID NOS: 9 18 <210> SEQ ID NO: 1 19 <211> LENGTH: 674 **ENTERED** 20 <212> TYPE: PRT 21 <213> ORGANISM: Homo sapiens 23 <400> SEQUENCE: 1 Met Asn Ser Gly Ala Met Arg Ile His Ser Lys Gly His Phe Gln Gly 25

25

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Lys Asp Ile Ser Tyr Leu Ile Ser Asn Lys Lys Glu Ala Lys Phe Ala 90 85 Gln Thr Leu Gly Arg Ile Ser Pro Val Pro Ser Pro Glu Ser Ala Tyr 105 37 100 Thr Ala Glu Thr Thr Ser Pro His Pro Ser His Asp Gly Ser Ser Phe 38 125 39 120 Lys Ser Pro Asp Thr Val Cys Leu Ser Arg Gly Lys Leu Leu Val Glu 40 135 140 41 Lys Ala Ile Lys Asp His Asp Phe Ile Pro Ser Asn Ser Ile Leu Ser 155 43 Asn Ala Leu Ser Trp Gly Val Lys Ile Leu His Ile Asp Asp Ile Arg 44 170 45 165 Tyr Tyr Ile Glu Gln Lys Lys Lys Glu Leu Tyr Leu Leu Lys Lys Ser 46 47 180 185 Ser Thr Ser Val Arg Asp Gly Gly Lys Arg Val Gly Ser Gly Ala Gln 48 205 49 200 Lys Thr Arg Thr Gly Arg Leu Lys Lys Pro Phe Val Lys Val Glu Asp 50 215 51 Met Ser Gln Leu Tyr Arg Pro Phe Tyr Leu Gln Leu Thr Asn Met Pro

27

29

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32 33

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54		Tlo	λen	Тиг	Sar	-	G1n	T.375	Pro	Cvs		Pro	Phe	Asp	Va l	
55	Pile	TIE	VPII	тут	245	116	GIII	БУЗ	110	250	DCI	110	1 110	1105	255	1101
56	Tuc	Dro	Sor	Sor		Gln	Lve	Gln	Thr		Va 1	Lvs	T.en	Arg		Gln
57	пуз	FIO	Der	260	MCC	0111		01	265	01		-1-		270		
58	mb ~	7 an	C1 17		Luc	Лхх	Glv	Glv		Sar	T10	Gln	T.e.ii	Gln	Leu	Lvs
59	1111	Asp	275	тэр	цуз	1 y ±	GLY	280	1111	DCI	110	OIII	285	0111		2,0
60	C1.,	T 17.0		Twe	Lizze	G1 v	Тттт		Glu	Cve	Cvc	T.esi		Lys	Tur	Glu
61	GIU	290	пуз	пуз	цуз	GIY	295	Cys	GIU	CYS	Cys	300	0111	LJ O	-1-	O.L.
62	7 cn		Glu	Thr	uic	Τ.Δ11		Ser	Glu	Gln	Hic		Asn	Phe	Ala	Gln
63	305	пеп	GIU	1111	птэ	310	пси	JCI	Gra	OIII	315	1119	*****	1		320
64		λen	Gln	ጥላታ	Gln		Va 1	Aen	Δsn	Tle		Ser	Lvs	Leu	Va 1	
65	261	ASII	GIII	1 Y 1	325	VUI	vai	nop	мор	330	, 44	001		Lou	335	
	Aen 1	Dho 1	Jal (2111 7		2111 1	ī.ve i	Aan '	rhr i		vs 1	lvs 1	lvs /	Ara :		Lvs
67	250															
68	mara-	Cor	V=1		Sor	Τ.Δ11	Sar	Dro		Ser	Δla	Ser	Va 1	Leu	Lvs	Lvs
69	тут	Ser	355	GIY	Ser	Leu	Ser	360	vu.	UCI	nii	DCI	365	<u> L</u> Cu	2,0	275
	mb x	Clu		Two	Glu	T.370	Val		T.Au	Gln	ніс	Tle		Gln	Lvs	Asp
70	THI	370	GIII	гуу	Glu	пуз	375	GIU	ьęи	GIII	1113	380	Der	GIII	цуз	upb
71	Crra		C111	λan	V av	Пръ		Va 1	T.37.0	Glu	Gln		Dhe	Leu	ጥህን	Lvs
72	-	GIII	GIU	кър	ASP	390	1111	Val	пуз	Giu	395	AJII	1110	шси	-11-	400
73	385	mh w	C1 n	C1.	mb v		T ***C	Twa	LOU	Lou		Tla	Sar	Glu	Dro	
74	GIU	TIIT	GIII	Giu	405	GIU	цуэ	цуз	пеа	410	rne	110	UCI	Olu	415	110
75	Dwo	TI d	Dro	cor		Clu	Lou	λνα	G1v		Δen	Glu	T.vs	Met		Δsn
76 77	PIU	птэ	PIO	420	ASII	GIU	neu	Arg	425	пси	non	Oila	ш, о	430	001	
77 78	Two	Cvc	Cor		Τ.Δ11	Sar	Thr	Δla		Δsn	Asn	Tle	Arσ	Gln	Asn	Phe
79	цуз	Cys	435	Mec	пеп	Jer	1111	440	OIU	пор	1152	110	445	01		1.1.0
80	Thr	Gln		Pro	T.e.11	Hic	T.VS		Lvs	Gln	Glu	Cvs		Leu	Asp	Ile
81	1111	450	LCu	110	LCu	1115	455		270	V		460				
82	Ser		Hic	Thr	Len	Ser		Asn	Asp	Leu	Glu		Leu	Arg	Val	Asp
83	465	014				470					475			3		480
84		Tvr	Lvs	Cvs	Asn		Gln	Ala	Ser	Va1	His	٧al	Ser	Asp	Phe	Ser
85		-1-	-1-	-1-	485					490				-	495	
86	Thr	Asp	Asn	Ser		Ser	Gln	Pro	Lys	Gln	Lys	Ser	Asp	Thr	Val	Leu
87				500					505		-		-	510		
88	Phe	Pro	Ala		Asp	Leu	Lys	Glu	Lys	Asp	Leu	His	Ser	Ile	Phe	Thr
89			515		-		-	520	-	-			525			
90	His	Asp	Ser	Gly	Leu	Ile	Thr	Ile	Asn	Ser	Ser	Gln	Glu	His	Leu	Thr
91		530		•			535					540				
92	Val		Ala	Lys	Ala	Pro	Phe	His	Thr	Pro	Pro	Glu	Glu	Pro	Asn	Glu
93	545			-		550					555					560
94		Asp	Phe	Lys	Asn	Met	Asp	Ser	Leu	Pro	Ser	Gly	Lys	Ile	His	Arg
95	-	-		_	565		_			570					575	
96	Lys	Val	Lys	Ile	Ile	Leu	Gly	Arg	Asn	Arg	Lys	Glu	Asn	Leu	Glu	\mathtt{Pro}
97	_		_	580			_	-	585					590		
98	Asn	Ala	Glu	Phe	Asp	Lys	Arg	Thr	Glu	Phe	Ile	Thr	Gln	Glu	Glu	Asn
99			595					600					605			
100	Ar	g Ile	е Суа	s Se	r Se	r Pro	va.	l Gl	n Se	r Lei	ı Le	ı Ası	. Le	ı Phe	e Glı	n Thr
101		610	0				61	5				620)			

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Input Set: A:\ARAI SEQUENCE LISTING.txt
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102 Ser Glu Glu Lys Ser Glu Phe Leu Gly Phe Thr Ser Tyr Thr Glu Lys
                                             635
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103 625
104 Ser Gly Ile Cys Asn Val Leu Asp Ile Trp Glu Glu Glu Asn Ser Asp
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106 Asn Leu Leu Thr Ala Phe Phe Ser Ser Pro Ser Thr Ser Thr Phe Thr
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108 Gly Phe
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111 <210> SEQ ID NO: 2
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113 <212> TYPE: PRT
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119 Gly Ile Gln Val Lys Asn Glu Lys Asn Arg Pro Ser Leu Lys Ser Leu
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                                      25
121 Lys Thr Asp Asn Arg Pro Glu Lys Ser Lys Cys Lys Pro Leu Trp Gly
122
                                  40
    Lys Val Phe Tyr Leu Asp Leu Pro Ser Val Thr Ile Ser Glu Lys Leu
123
124
                              55
125 Gln Lys Asp Ile Lys Asp Leu Gly Gly Arg Val Glu Glu Phe Leu Ser
                                              75
126
                          70
    Lys Asp Ile Ser Tyr Leu Ile Ser Asn Lys Lys Glu Ala Lys Phe Ala
127
                                          90
128
    Gln Thr Leu Gly Arg Ile Ser Pro Val Pro Ser Pro Glu Ser Ala Tyr
129
130
                                     105
    Thr Ala Glu Thr Thr Ser Pro His Pro Ser His Asp Gly Ser Ser Phe
131
132
             115
                                 120
133 Lys Ser Pro Asp Thr Val Cys Leu Ser Arg Gly Lys Leu Leu Val Glu
                             135
                                                 140
134
135 Lys Ala Ile Lys Asp His Asp Phe Ile Pro Ser Asn Ser Ile Leu Ser
                                             155
                        150
136
    Asn Ala Leu Ser Trp Gly Val Lys Ile Leu His Ile Asp Asp Ile Arg
137
                                         170
138
                    165
    Tyr Tyr Ile Glu Gln Lys Lys Lys Glu Leu Tyr Leu Leu Lys Lys Ser
139
                                     185
140
                180
    Ser Thr Ser Val Arg Asp Gly Gly Lys Arg Val Gly Ser Gly Ala Gln
141
                                 200
142
    Lys Thr Arg Thr Gly Arg Leu Lys Lys Pro Phe Val Lys Val Glu Asp
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146 225
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149 <211> LENGTH: 2780
150 <212> TYPE: DNA
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153 <400> SEQUENCE: 3
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156 ggccagagcg aggcgcgaga aggacggcgg cgtgaggggg cgggggggcgcgc agcgcgagaa 180
158 cgcgcgtatc ggcgccgcgg ccgcgtgacg cgttttcaaa tcttcaaccg ccgcagccca 300
159 ctcgtttgtg ctttgcgcct tcctcctccg cgccttggag ccggatccgg ccccggaaac 360
160 ccgacctgca gacgcggtac ctctactgcg tagaggccgt agctggcgga aggagagag 420
161 eggeegteet gteaacagge egggggaage egtgettteg eggetgeeeg gtgegacaet 480
162 ttctccggac ccagcatgta ggtgccgggc gactgccatg aactccggag ccatgaggat 540
163 ccacagtaaa ggacatttcc agggtggaat ccaagtcaaa aatgaaaaaa acagaccatc 600
164 totgaaatot otgaaaactg ataacaggoo agaaaaatoo aaatgtaago cactttgggg 660
165 aaaagtattt taccttgact taccttctgt caccatatct gaaaaacttc aaaaggacat 720
166 taaggatctg ggagggcgag ttgaagaatt tctcagcaaa gatatcagtt atcttatttc 780
167 aaataagaag gaagctaaat ttgcacaaac cttgggtcga atttctcctg taccaagtcc 840
168 agaatetgca tatactgcag aaaccactte aceteateee agecatgatg gaagtteatt 900
169 taagtcacca gacacagtgt gtttaagcag aggaaaatta ttagttgaaa aagctatcaa 960
170 ggaccatgat tttattcctt caaatagtat attatcaaat gccttgtcat ggggagtaaa 1020
171 aattetteat attgatgaca ttagataeta cattgaacaa aagaaaaaag agttgtattt 1080
172 actcaagaaa tcaagtactt cagtaagaga tgggggcaaa agagttggta gtggtgcaca 1140
173 aaaaacaaga acaggaagac tcaaaaagcc ttttgtaaag gtggaagata tgagccaact 1200
174 ttataggcca ttttatcttc agctgaccaa tatgcctttt ataaattatt ctattcagaa 1260
175 gccctgcagt ccatttgatg tagacaagcc atctagtatg caaaagcaaa ctcaggttaa 1320
176 actaagaatc caaacagatg gcgataagta tggtggaacc tcaattcaac tccagttgaa 1380
177 agagaagaag aaaaaaggat attgtgaatg ttgcttgcag aaatatgaag atctagaaac 1440
178 tcaccttcta agtgagcaac acagaaactt tgcacagagt aaccagtatc aagttgttga 1500
179 tgatattgta tctaagttag tttttgactt tgtggaatat gaaaaggaca cacctaaaaa 1560
180 gaaaagaata aaatacagtg ttggatccct ttctcctgtt tctgcaagtg tcctgaaaaa 1620
181 gactgaacaa aaggaaaaag tggaattgca acatatttct cagaaagatt gccaggaaga 1680
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183 gctcctgttt atttcagagc ccatccccca cccttcaaat gaattgagag ggcttaatga 1800
184 qaaaatgagt aataaatgtt ccatgttaag tacagctgaa gatgacataa gacagaattt 1860
185 tacacagcta cctctacata aaaacaaaca ggaatgcatt cttgacattt ccgaacacac 1920
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194 atcagaattt ttgggtttca caagctacac agaaaagagt ggtatatgca atgttttaga 2460
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197 catattcttg aaatttttat aaatatgtat ggaaattctt aggatttttt taccagcttt 2640
198 gtttacagac ccaaatgtaa atattaaaaa taaatatttg caattttcta cagaattgaa 2700
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202 <210> SEQ ID NO: 4
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203 <211> LENGTH: 2719 204 <212> TYPE: DNA

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205 <213> ORGANISM: Homo sapiens 207 <400> SEQUENCE: 4 208 aatteggeac gagetetetg aggetgegee aagaeetgaa geggeggaee gagageeegg 60 209 gtctgagact gagagagcaa cggaatggag gcggggtaga ggcggaaaca caacctgcag 120 210 ggccagagcg aggcgcgaga aggacggcgg cgtgaggggg cgggggggcgcgc agcgcgagaa 180 212 cgcgcgtatc ggcgccgcgg ccgcgtgacg cgttttcaaa tcttcaaccg ccgcagccca 300 213 ctcqtttgtg ctttgcgcct tcctcctccg cgccttggag ccggatccgg cccggaaac 360 214 ccgacctgca gacgcggtac ctctactgcg tagaggccgt agctggcgga aggagagag 420 215 cggccgtcct gtcaacaggc cgggggaagc cgtgctttcg cggctgcccg gtgcgacact 480 216 ttctccggac ccagcatgta ggtgccgggc gactgccatg aactccggag ccatgaggat 540 217 ccacagtaaa ggacatttcc agggtggaat ccaagtcaaa aatgaaaaaa acagaccatc 600 218 totgaaatot otgaaaactg ataacaggoo agaaaaatoo aaatgtaago caotttgggg 660 219 aaaagtattt taccttgact taccttctgt caccatatct gaaaaacttc aaaaggacat 720 220 taaggatctg ggagggcgag ttgaagaatt tctcagcaaa gatatcagtt atcttatttc 780 221 aaataagaag gaagctaaat ttgcacaaac cttgggtcga atttctcctg taccaagtcc 840 222 agaatctgca tatactgcag aaaccacttc acctcatccc agccatgatg gaagttcatt 900 223 taagtcacca gacacagtgt gtttaagcag aggaaaatta ttagttgaaa aagctatcaa 960 224 ggaccatgat tttattcctt caaatagtat attatcaaat gccttgtcat ggggagtaaa 1020 225 aattetteat attgatgaea ttagataeta eattgaacaa aagaaaaaag agttgtattt 1080 226 actcaagaaa tcaagtactt cagtaagaga tgggggcaaa agagttggta gtggtgcaca 1140 227 aaaaacaaga acaggaagac tcaaaaagcc ttttgtaaag gtggaagata tgagccaaag 1200 228 ccctgcagtc catttgatgt agacaagcca tctagtatgc aaaagcaaac tcaggttaaa 1260 229 ctaagaatcc aaacagatgg cgataagtat ggtggaacct caattcaact ccagttgaaa 1320 230 qaqaaqaaga aaaaaggata ttgtgaatgt tgcttgcaga aatatgaaga tctagaaact 1380 231 caccttctaa gtgagcaaca cagaaacttt gcacagagta accagtatca agttgttgat 1440 232 gatattgtat ctaagttagt ttttgacttt gtggaatatg aaaaggacac acctaaaaag 1500 233 aaaagaataa aatacagtgt tggatccctt tctcctgttt ctgcaagtgt cctgaaaaag 1560 234 actgaacaaa aggaaaaagt ggaattgcaa catatttctc agaaagattg ccaggaagat 1620 235 gatacaacag tgaaggagca gaattteetg tataaagaga eecaggaaac tgaaaaaaag 1680 236 ctcctgttta tttcagagcc catcccccac ccttcaaatg aattgagagg gcttaatgag 1740 237 aaaatgagta ataaatgttc catgttaagt acagctgaag atgacataag acagaatttt 1800 238 acacagetae etetacataa aaacaaacag gaatgeatte tigacattie egaacacaca 1860 239 ttaagtgaaa atgacttaga agaactaagg gtagatcact ataaatgtaa catacaggca 1920 240 totgtacatg tttotgattt cagtacagat aatagtggat otcaaccaaa acagaagtca 1980 241 gatactgtgc tttttccagc aaaggatctc aaggaaaagg accttcattc aatatttact 2040 242 catgattctg gtctgataac aataaacagt tcacaagagc acctaactgt tcaggcaaag 2100 243 gctccattcc atactcctcc tgaggaaccc aatgaatgtg acttcaagaa tatggatagt 2160 244 ttaccttctg gtaaaataca tcgaaaagtg aaaataatat taggacgaaa tagaaaagaa 2220 245 aatctggaac caaatgctga atttgataaa agaactgaat ttattacaca agaagaaaac 2280 246 agaatttgta gttcaccggt acagtcttta ctagacttgt ttcagactag tgaagagaaa 2340 247 tcagaatttt tgggtttcac aagctacaca gaaaagagtg gtatatgcaa tgttttagat 2400 248 atttgggaag aggaaaattc agataatctg ttaacagcgt ttttctcgtc cccttcaact 2460 249 totacattta ctggctttta gaatttaaaa aatgcatact tttcagaagt gataaggatc 2520 250 atattcttga aatttttata aatatgtatg gaaattctta ggatttttt accagctttg 2580 251 tttacagacc caaatgtaaa tattaaaaat aaatatttgc aattttctac agaattgaat 2640 252 acctgttaaa gaaaaattac agaataaact tgtgactggt cttgttttac attaaaaaaa 2700 253 aaaaaaaaaa aaactcgag 255 <210> SEQ ID NO: 5

VERIFICATION SUMMARY

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